

**CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS SYSTEM**  
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M106 Giant Kangaroo Rat *Dipodomys ingens*  
Family: Heteromyidae Order: Rodentia Class: Mammalia

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#### DISTRIBUTION, ABUNDANCE, AND SEASONALITY

Permanent resident occurring in scattered colonies along the western side of the San Joaquin Valley (e.g., Carrizo Plain, Panoche Valley). Found on fine sandy loam soils supporting sparse annual grass/forb vegetation, and marginally found in low-density alkali desert scrub. Currently occupies about 2% of its former range (California Dept. Fish and Game 1980a). Primary loss of habitat has been due to cultivation. In addition, the trampling of colonies by cattle and the use of rodenticides have degraded habitats and reduced population levels.

#### SPECIFIC HABITAT REQUIREMENTS

**Feeding:** Seeds of peppergrass and filaree are primary foods of giant kangaroo rats (Shaw 1934). Green vegetation also is consumed, especially spring. Seeds are buried in small, shallow holes winter and spring where they dry. Large quantities of dried seeds are cached in the burrows (Shaw 1934).

**Cover:** Level terrain and sandy loam soils are needed for burrowing. Optimal cover consists of areas with almost no shrub overstory, and very few physiographic variations (Grinnell 1932, Shaw 1934, Hawbecker 1951). Burrow systems (Shaw 1934) may cover an area of 5.2 x 6.7 m (17 x 22 ft).

**Reproduction:** Level terrain and sandy loam soils are required for excavating burrows and nests.

**Water:** Drinking water apparently is not required.

**Pattern:** Insufficient data available. *D. ingens* appears to require fairly large areas of gently sloping, homogenous terrain, with only scattered shrubs, but with an open, herbaceous cover of annual forbs and grasses.

#### SPECIES LIFE HISTORY

**Activity Patterns:** Yearlong nocturnal activity.

**Seasonal Movements/Migration:** Non-migratory.

**Home Range:** Williams (1980) reported a population density of 52/ha (21/ac). Average home range size on the Carrizo Plain, in California was 239.3 sq.m (Braun 1985).

**Territory:** Little information available. The area immediately adjacent to the burrow, where

surface caches of seeds are stored, may be defended, as is common in kangaroo rats.

Reproduction: Breeds from January to May; peak probably occurs in early spring. Litter size ranges from 4-6. Young born and reared in the burrows.

Niche: *D. ingens* is the largest species in the Genus *Dipodomys*; in optimal habitat it probably is the dominant nocturnal rodent. It is sympatric with *Onychomys torridus*, a nocturnal arthropod eater, and *Ammospermophilus nelsoni*, a diurnal eater of green vegetation and arthropods. Predators include kit foxes, badgers, coyotes, barn owls, rattlesnakes, and gopher snakes. Insects and birds potentially are competitors for seeds.

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